

AMENDMENT TO THE CLAIMS

The following claim listing replaces all prior listings and versions of the claims:

LISTING OF CLAIMS

1-2. (Cancelled)

3. (Currently Amended) ~~The display apparatus of claim 1,~~ A display apparatus,
comprising:
a display panel provided with a pixel section including a light-emitting device driven by a
current and with a signal line connected to the pixel section; and
a source driver for supplying a drive current to the pixel section via the signal line,
wherein the source driver includes:
a register for latching display data having N bits and for outputting the display
data;
a timing control unit for outputting a control signal; and
a current driver for allowing the drive current which has been set at an arbitrary
value to flow during a given period in a current setting mode, while allowing the drive
current which has been set with the display data output from the register to flow during
operation periods other than the given period, in accordance with the control signal,
wherein the current driver includes:
a current mode D/A converter including N current sources for outputting currents
according to the bits of the display data;
an additional current source for outputting a current with an arbitrary value; and
a first switch for receiving the control signal and electrically connecting the
additional current source and the pixel section to each other only during the given period

in the current setting mode.

4. (Original) The display apparatus of claim 3, wherein the N current sources in the D/A converter are constituted by MISFETs forming current mirrors with each other, and the additional current source is constituted by one or more MISFETs forming current mirrors together with the MISFETs constituting the N current sources.

5. (Original) The display apparatus of claim 3, wherein the additional current source receives the display data and is capable of outputting a current according to the bits of the display data.

6. (Currently Amended) ~~The display apparatus of claim 1,~~ A display apparatus, comprising:
a display panel provided with a pixel section including a light-emitting device driven by a current and with a signal line connected to the pixel section; and
a source driver for supplying a drive current to the pixel section via the signal line,
wherein the source driver includes:
a register for latching display data having N bits and for outputting the display data;
a timing control unit for outputting a control signal; and
a current driver for allowing the drive current which has been set at an arbitrary value to flow during a given period in a current setting mode, while allowing the drive current which has been set with the display data output from the register to flow during operation periods other than the given period, in accordance with the control signal,

wherein the current driver is a current mode D/A converter including:

N current sources for outputting currents according to the bits of the display data;

second switches respectively provided on output paths of currents flowing in the respective N current sources;

N bypasses for shunting and outputting the currents flowing in the N current sources, by way of the respective second switches; and

third switches respectively provided on the N bypasses,

wherein the third switches are ON with the control signal during the given period in the current setting mode, whereas the third switches are OFF with the control signal during the operation periods other than the given period.

7. (Cancelled)

8. (Currently Amended) ~~The display apparatus of claim 7,~~ A display apparatus,
comprising:

a display panel provided with a pixel section including a light-emitting device driven by a current and with a signal line connected to the pixel section; and

a source driver for supplying a drive current to the pixel section via the signal line,

wherein the source driver includes:

a register for latching display data having N bits and for outputting the display data;

a timing control unit for outputting a control signal; and

a current driver for allowing the drive current which has been set at an arbitrary value to flow during a given period in a current setting mode, while allowing the drive

current which has been set with the display data output from the register to flow during operation periods other than the given period, in accordance with the control signal, wherein the value of the current output from the current driver changes stepwise during the given period in the current setting mode and,

wherein the current driver is a current mode D/A converter including:

N current sources for outputting currents according to the bits of the display data;
second switches respectively provided on output paths of currents flowing in the respective N current sources;

N bypasses for shunting and outputting the currents flowing in the N current sources, by way of the respective second switches; and

third switches respectively provided on the N bypasses,

wherein during the given period in the current setting mode, the third switches are turned ON with the control signal and then turned OFF sequentially from the third switch connected to the current source associated with the most significant bit.

9. (Cancelled)

10. (Currently Amended) ~~The display apparatus of claim 7,~~ A display apparatus, comprising:

a display panel provided with a pixel section including a light-emitting device driven by a current and with a signal line connected to the pixel section; and

a source driver for supplying a drive current to the pixel section via the signal line, wherein the source driver includes:

a register for latching display data having N bits and for outputting the display

data;

a timing control unit for outputting a control signal; and

a current driver for allowing the drive current which has been set at an arbitrary value to flow during a given period in a current setting mode, while allowing the drive current which has been set with the display data output from the register to flow during operation periods other than the given period, in accordance with the control signal,

wherein the source driver further includes:

voltage setting means for outputting a given voltage; and

a comparator for comparing the output voltage of the voltage setting means with an output voltage of the current driver and outputting the comparison result to the timing control unit,

wherein while the drive current with the arbitrary value flows from the current driver during the given period, the value of the drive current is switched to a current value set with the display data corresponding to a detection that the output voltage of the current driver becomes equal to the output voltage of the voltage setting means.

11. (Original) The display apparatus of claim 10, wherein the given voltage output from the voltage setting means is a stable output voltage which is the output voltage of the current driver when the value of a current flowing in the pixel section reaches a target value in the current setting mode.

12. (Original) The display apparatus of claim 11, wherein the voltage setting means has a register for latching setting data so as to set the stable output voltage at an arbitrary value.

13. (Original) The display apparatus of claim 10, wherein the voltage setting means is a dummy circuit including:

a dummy pixel section which is provided on the display panel, includes a TFT and a capacitance and is not used for a display;

a dummy signal line provided on the display panel and supplying a current to the dummy pixel section; and

a dummy pixel driver provided in the source driver, connected to the dummy signal line and the comparator and including a dummy current driver for outputting a constant current during operation.

14. (Original) The display apparatus of claim 13, wherein the current driver is plural in number, and the dummy circuit is singular in number with respect to the plurality of current drivers.

15. (Original) The display apparatus of claim 14, wherein the source drivers are respectively provided on a plurality of semiconductor chips having an identical structure, and the dummy pixel driver is provided on each of the semiconductor chips.

16. (Original) The display apparatus of claim 10, wherein the comparator is a comparator having a differential amplifier.

17-42. (Cancelled)